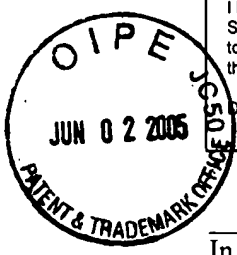


06-03-05

IFW



I hereby certify that this correspondence is being deposited with the U.S. Postal Service as Express Mail, Airbill No. EV526068600US, in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on the date shown below.  
Dated: June 2, 2005      Signature: Ava R. Brown  
(Ava R. Brown)

Docket No.: 05542/060002  
(PATENT)

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re Patent Application of:  
Kenji Hayashi

Application No.: 10/644,573

Group Art Unit: 2879

Filed: August 20, 2003

Examiner: Kevin J. Quarterman

For: ELECTROLUMINESCENT DEVICE,  
METHOD FOR MANUFACTURING THE  
SAME, AND ELECTRONIC APPARATUS

**TRANSMITTAL LETTER**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Dear Sir:

On March 7 2005, a Revocation and Substitution Power of Attorney was filed in this case in error. The serial number was inadvertently changed by one number. We are enclosing the original Office Action received from the U.S. Patent Office and have forwarded a courtesy copy to the attorneys of record, Oliff & Berridge, PLC. Please make the necessary correction for the above referenced patent application.

Dated: June 2, 2005

Respectfully submitted,

By Jeffrey S. Bergman  
Jeffrey S. Bergman  
Registration No.: 45,925  
OSHA · LIANG LLP  
1221 McKinney St., Suite 2800  
Houston, Texas 77010  
(713) 228-8600



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
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www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/644,573

26722

7590

05/27/2005

Kenji Hayashi

116887

6643

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SUITE 2800  
HOUSTON, TX 77010

EXAMINER

QUARTERMAN, KEVIN J

ART UNIT

PAPER NUMBER

2879

DATE MAILED: 05/27/2005

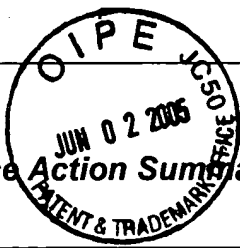
RECEIVED

MAY 31 2005

OSHA • LIANG LLP

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**



Application No.

10/644,573

Applicant(s)

HAYASHI, KENJI

Examiner

Kevin Quarterman

Art Unit

2879

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 23 March 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) 13-21 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2 and 4-12 is/are rejected.
- 7) ☒ Claim(s) 3 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 August 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 0405:0205:0304:12-03
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Election/Restrictions***

1. Applicant's election with traverse of Group I, claims 1-12, in the reply filed on 23 March 2005 is acknowledged. The traversal is on the ground(s) that the subject matter of all claims is sufficiently related that a thorough search for the subject matter of any one group of claims would encompass a search for the subject matter of the remaining claims. This is not found persuasive because the Examiner respectfully disagrees. The Examiner notes that the non-elected invention appears to be reasonably analogous to arts of manufacturing processes, such as vapor deposition and etching. Accordingly, a reasonable field of search for the non-elected invention is likely to include a search in art of manufacturing processes, which would not be required for examination of the elected invention.

2. Therefore, since the inventions of Groups I and II have been shown to be related, but patentably distinct and the undue burden to the examiner has been shown by the different classification of the inventions and the different searches required for the inventions, the requirement is still deemed proper and is therefore made FINAL.

### ***Specification***

3. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

4. The following title is suggested: --ELECTROLUMINESCENT DEVICE WITH BARRIER LAYER STRUCTURE, METHOD FOR MANUFACTURING THE SAME, AND ELECTRONIC APPARATUS--.

***Drawings***

5. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the sublayer of claims 4-7 must be shown or the features canceled from the claims. No new matter should be entered.
6. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Claim Objections***

7. Claim 1 is objected to because of the following informalities: In line 4 of the claim, it appears to the Examiner that the term "to" preceding "over" should be removed. Appropriate correction is required.

***Claim Rejections - 35 USC § 102***

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

9. Claims 1, 2, 4-6, and 8-12 are rejected under 35 U.S.C. 102(e) as being anticipated by Park (US Pub. 2003/0218422).
10. Regarding independent claim 1, Figure 4D of Park shows an electroluminescent device comprising first electrodes (310); electroluminescent layers (320, 330, 340) disposed over the first electrodes; a second electrode (350) disposed over the electroluminescent layers; and a barrier layer (440, 430) in contact with the second electrode, at least the surface of the second electrode facing the barrier layer including an inorganic oxide (pg. 2, ¶ [0023]), and at least the surface of the barrier layer facing the second electrode including an inorganic compound (pg. 3, ¶ [0030]).
11. Regarding claim 2, Park discloses the second electrode including indium tin oxide or indium zinc oxide (pg. 2, ¶ [0023]).

12. Regarding claim 4, Figure 4D of Park shows the barrier layer including at least one sublayer (430) composed of a silicon compound (pg. 3, ¶ [0030]).
13. Regarding claim 5, Figure 4D of Park shows the barrier layer including a sublayer (430) in contact with the second electrode, the sublayer being composed of silicon oxide (pg. 3, ¶ [0030]).
14. Regarding claim 6, Figure 4D of Park shows the barrier layer including a sublayer (430) in contact with the second electrode, the sublayer being composed of silicon nitride (pg. 3, ¶ [0030]).
15. Regarding claim 8, Figure 4D of Park shows an insulating layer (430) disposed around the second electrode, the insulating layer being composed of a silicon compound (pg. 3, ¶ [0030]).
16. Regarding claim 9, Figure 4D of Park shows a protective layer (200) that covers the barrier layer.
17. Regarding claim 10, Figure 4D of Park shows an adhesive layer (420) disposed between the barrier layer and the protective layer.
18. Regarding claim 11, Park discloses the adhesive layer including a material that is softer than that of the protective layer (pg. 2, ¶ [0023]).
19. Regarding claim 12, Park discloses an electronic apparatus comprising the electroluminescent device according to claim 1 (pg. 1, ¶ [0003]).

***Claim Rejections - 35 USC § 103***

20. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

21. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Park (US Pub. 2003/0218422) in view of Ogura (US Pub. 2002/0070663).

22. Park teaches the claimed limitations of claim 4, as discussed earlier, but fails to exemplify the sublayer being composed of silicon nitride oxide.

23. Ogura teaches that it is known in the art to provide electroluminescent devices with barrier layers being composed of silicon nitride oxide for insulating other parts of the device (pg. 4, ¶ [0069]; pg. 5, ¶ [0096]).

24. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the device of Park with a sublayer composed of silicon nitride oxide, as taught by Ogura, for improving the barrier characteristics of the device.

#### ***Allowable Subject Matter***

25. Claim 3 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

26. The following is a statement of reasons for the indication of allowable subject matter: The prior art of record neither shows or suggests an electroluminescent device comprising, in addition to the other limitations of the claim, a second electrode covering side faces and upper faces of the electroluminescent layers.



Art Unit: 2879

**Conclusion**

27. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. McCormick (US Pub. 2004/0119403) discloses an organic electroluminescent device with encapsulation.

**Contact Information**


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin Quarterman whose telephone number is (571) 272-2461. The examiner can normally be reached on M-TH (7-5:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimesh Patel can be reached on (571) 272-2457. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Kevin Quarterman  
Examiner  
Art Unit 2879

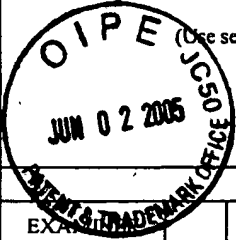
kq   
25 May 2005

  
Joseph Williams  
Primary Examiner  
Art Unit 2879

Sheet 1 of 1Form PTO-1449  
(REV. 8-83)US Dept. of Commerce  
PATENT & TRADEMARK OFFICEATTY DOCKET NO.  
116887APPLICATION NO.  
10/644,573

## INFORMATION DISCLOSURE STATEMENT

(Use several sheets if necessary)

APPLICANT  
Kenji HAYASHIFILING DATE  
August 20, 2003GROUP  
2879

## U.S. PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUB CLASS
<i>KE</i>	1	US 2004/0248386 A1	12/9/2004	Nishitani et al.	438	478
<i>KE</i>	2	US 6,829,023 B2	12/7/2004	Goto	344	113
<i>KE</i>	3	US 2002/0044111 A1	4/18/2002	Yamazaki et al.	345	83

## FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUB CLASS
<i>KE</i>	4	JP A 2002-049333 w/Abstract and Translation	2/15/2002	Japan	—	—
<i>KE</i>	5	JP A 2002-208491 w/Abstract and Translation	7/26/2002	Japan	—	—
<i>KE</i>	6	JP A 2002-203861 w/Abstract and Translation	7/19/2002	Japan	—	—
<i>1/KE</i>	7	JP A 08-111286 w/Abstract and Translation	4/30/1996	Japan	—	—

## OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, etc.)


EXAMINER

*Kevin Smith*

DATE CONSIDERED

*5/25/05*

Examiner: Initial if citation considered, whether or not citation is in conformance with M.P.E.P. 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Date: April 1, 2005

Sheet 1 of 1

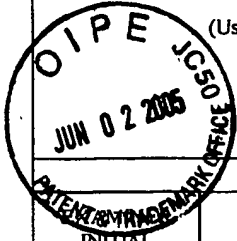
Form PTO-1449 (REV. 8-83)		US Dept. of Commerce PATENT & TRADEMARK OFFICE		ATTY DOCKET NO. 116887		APPLICATION NO. 10/644,573	
INFORMATION DISCLOSURE STATEMENT (Use several sheets if necessary)				APPLICANT Kenji HAYASHI			
				FILING DATE August 20, 2003		GROUP 2879	
U.S. PATENT DOCUMENTS							
EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUB CLASS	
<i>Ke</i>	1	US 2002/0045066 A1	4/18/2002	Beierlein et al.	428	690	
<i>Ke</i>	2	4,068,923	1/17/1978	Toida	349	132	
FOREIGN PATENT DOCUMENTS							
		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUB CLASS	
OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, etc.)							
EXAMINER <i>Kristen Smith</i>				DATE CONSIDERED 5/25/05			
Examiner: Initial if citation considered, whether or not citation is in conformance with M.P.E.P. 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.							

Date: February 11, 2005

Sheet 1 of 1Form PTO-1449  
(REV. 8-83)US Dept. of Commerce  
PATENT & TRADEMARK OFFICEATTY DOCKET NO.  
116887APPLICATION NO.  
10/644,573

## INFORMATION DISCLOSURE STATEMENT

(Use several sheets if necessary)

APPLICANT  
Kenji HAYASHIFILING DATE  
August 20, 2003GROUP  
2879

## U.S. PATENT DOCUMENTS

INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUB CLASS

## FOREIGN PATENT DOCUMENTS

	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUB CLASS
<i>1/62</i>	10-125931 w/Abstract and Translation	5/15/1998	Japan	<i>—</i>	<i>—</i>
<i>1/62</i>	2001-7340 w/Abstract and Translation	1/12/2001	Japan	<i>—</i>	<i>—</i>
<i>1/62</i>	EP 1 087 366 A2	3/28/2001	EPO	<i>—</i>	<i>—</i>
<i>1/62</i>	EP 1 139 325 A1	10/4/2001	EPO	<i>—</i>	<i>—</i>

## OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, etc.)


EXAMINER

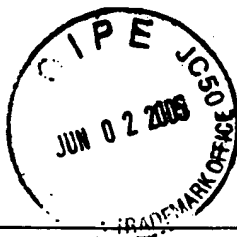
*King Smith*

DATE CONSIDERED

*5/25/05*

Examiner: Initial if citation considered, whether or not citation is in conformance with M.P.E.P. 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Date: March 12, 2004

Sheet 1 of 1

Form PTO-1449 (REV. 8-83)		US Dept. of Commerce PATENT & TRADEMARK OFFICE		ATTY DOCKET NO. 116887		APPLICATION NO. 10/644,573	
INFORMATION DISCLOSURE STATEMENT (Use several sheets if necessary)				APPLICANT Kenji HAYASHI			
				FILING DATE August 20, 2003		GROUP 2879	
U.S. PATENT DOCUMENTS							
EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUB CLASS	
FOREIGN PATENT DOCUMENTS							
		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUB CLASS	
<i>ka</i>		2003-142274 w/Abstract and Translation	5/2003	Japan	—	—	
<i>ka</i>		2003-142255 w/Abstract and Translation	5/2003	Japan	—	—	
<i>ka</i>		01-283937 w/Abstract	11/1989	Japan	—	—	
OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, etc.)							
EXAMINER <i>Kiriyama</i>				DATE CONSIDERED 5/25/05			
Examiner: Initial if citation considered, whether or not citation is in conformance with M.P.E.P. 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.							

Date: December 2, 2003

**Notice of References Cited**

Application/Control No.

10/644,573

Applicant(s)/Patent Under

Reexamination

HAYASHI, KENJI

Examiner

Kevin Quarterman

Art Unit

2879

Page 1 of 1

**U.S. PATENT DOCUMENTS**

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
	A	US-2003/0218422 A1	11-2003	Park et al.	313/512
	B	US-2002/0070663 A1	06-2002	Ogura et al.	313/506
	C	US-2004/0119403 A1	06-2004	McCormick et al.	313/506
	D	US-			
	E	US-			
	F	US-			
	G	US-			
	H	US-			
	I	US-			
	J	US-			
	K	US-			
	L	US-			
	M	US-			

**FOREIGN PATENT DOCUMENTS**

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	Classification
	N					
	O					
	P					
	Q					
	R					
	S					
	T					

**NON-PATENT DOCUMENTS**

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
	U	
	V	
	W	
	X	

\*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)  
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.